

REMARKS/ARGUMENTS

Claims 1, 2 and 4-9 are pending. By this Amendment, claim 1 is amended. Support for the amendments to claim 1 can be found, for example, in the present specification at page 11, lines 17 to 21, and in previously presented claim 1. No new matter is added. In view of the foregoing amendments and following remarks, reconsideration and allowance are respectfully requested.

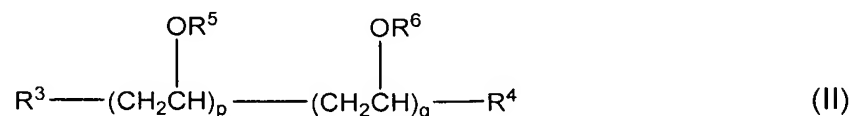
Information Disclosure Statement

The initialed Form PTO-1449 attached to the Office Action does not include an indication that each of the items cited in the September 29, 2010 Information Disclosure Statement has been considered by the Examiner (*see* item AW). Applicants respectfully request that the Examiner consider of each of the cited references, indicate such consideration on the attached Form PTO-1449, and return the initialed form to the undersigned.

Rejection Under 35 U.S.C. §103

The Office Action rejects claims 1, 2, and 4-9 under 35 U.S.C. §103(a) over U.S. Patent No. 6,261,474 to Egawa et al. ("Egawa") in view of U.S. Patent No. 5,801,132 to Kaneko et al. ("Kaneko"). Applicants respectfully traverse the rejection.

Claim 1 recites "[a] A refrigerating oil composition, comprising: a refrigerant (A) comprising as a predominant component a C1-C8 hydrocarbon compound; and a base oil (B) comprising a polyvinyl ether represented by formula (II):



wherein each of R<sup>3</sup> and R<sup>4</sup> represents a hydrogen atom, a C1-C18 hydrocarbon group, or a C2-C18 acyl group; R<sup>5</sup> represents a methyl group; R<sup>6</sup> represents an ethyl group; p is an

integer of 1 or more; and q is an integer of 1 or more; wherein the composition satisfies the following conditions: (i) solubility of the refrigerant (A) in the base oil (B) is 40 mass% or less at 40°C and 1.2 MPa; and (ii) mixture viscosity of the refrigerating oil composition is 0.1 mm<sup>2</sup>/s or more at 90°C and 2.3 MPa" (emphasis added). Egawa and Kaneko do not disclose or suggest such a composition.

Applicants previously argued that Egawa fails to disclose or suggest a base oil having the structure recited in claim 1. In response, the Office Action notes that "instant claim 1 recites that q can be zero and as such including units of  $-(CH_2C(OR^6)H)_q-$  is optional ... Egawa obviates a polyvinyl ether comprising only units of (a) wherein R is a hydrocarbon group with 1 to 3 carbon atoms and can be methyl ...." *See* Office Action, pages 5 to 6 (emphasis in original). By this Amendment, claim 1 is amended to require that q is an integer of 1 or more. In view of such amendments, Applicants again submit that Egawa fails to disclose or suggest a base oil having the structure recited in claim 1. There is nothing in Egawa that would suggest a structure in which substituents corresponding to R<sup>5</sup> and R<sup>6</sup> in formula (II) of claim 1 are methyl and ethyl, respectively.

Kaneko does not remedy the deficiencies of Egawa. Kaneko, like Egawa, fails to disclose or suggest a base oil having the particular structure recited in claim 1. Accordingly, the combination of references fails to disclose or suggest each and every feature of claim 1.

In the previous response, Applicants directed attention to the experimental results in the present specification, which demonstrate, e.g., that polyvinyl ethers exemplified in Egawa do not allow for solubilities as required in claim 1. *See* present specification, pages 25 to 26; Table 4. The Office Action asserts that the results are not commensurate in scope with the claims because, *inter alia*, q is an integer greater than zero. *See* Office Action, page 6. Applicants submit that the amendments to claim 1 address this concern. The Office Action further asserts that "it appears intrinsic that a polyvinyl ether having only methyl units, such

as taught by Egawa would necessarily result in a base oil (B) such that such that the refrigerant (A) will have a solubility in B of 40 mass% or less at 40 °C and 1.2 MPa." See Office Action, page 7. However, Applicants submit that a polyvinyl ether having only methyl units is outside of the scope of claim 1, so the solubility properties of a composition including such a polyvinyl ether are inapposite.

Moreover, Applicants again note that one of ordinary skill in the art would have been discouraged from replacing the oil composition of Kaneko with the base oil of Egawa in view of the possibility of, e.g., a deterioration in lubrication properties. Accordingly, one of ordinary skill in the art would not have reasonably expected success upon combining the teachings of Egawa and Kaneko as proposed in the Office Action. See MPEP §2143.02.

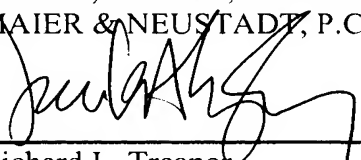
As explained, claim 1 would not have been rendered obvious by Egawa and Kaneko. Claims 2 and 4-9 depend from claim 1 and, thus, also would not have been rendered obvious by Egawa and Kaneko. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

Conclusion

For the foregoing reasons, Applicants submit that claims 1, 2 and 4-9 are in condition for allowance. Prompt reconsideration and allowance are respectfully requested.

Respectfully submitted,

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